

## SYNOPSIS

02/27/2020

# Review of “Potential association between COVID-19 mortality and health-care resource availability”

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## One-Minute Summary

- Using data reported by the Chinese Center for Disease Control and Prevention up to February 16, 2020, the authors examine **disparities in mortality rates of coronavirus disease 2019 (COVID-19) cases in different regions of China:**
  - National average: 2.5%
  - Wuhan: > 3.0%
  - Hubei province (outside of Wuhan): 2.9%
  - All other provinces: 0.7%
- **Mortality rates (%) and cases per 10,000 population (health care burden proxy) were significantly higher in Hubei** ( $p < 0.001$  for both variables), compared to outside Hubei.
- There was a **positive correlation** between COVID-19 mortality and incidence ( $r = 0.61$ ,  $p < 0.0001$ ).
- The authors postulate that the **disparity in mortality rates is due to the rapid emergence of COVID-19 in Hubei**, leading to **decreased health care resource availability and poorer outcomes for patients in Hubei**.

## Additional Information

- The authors state that the **rapid building of new medical facilities, mobilizing health care workers and faster delivery of medical supplies** were essential in controlling the epidemic in Hubei and improving patient outcomes.
- The authors acknowledge that availability and accessibility to healthcare resources vary regionally in China. Mortality rates in developed coastal provinces, such as Zhejiang and Guangdong, were 0% (out of 1,171 patients) and 0.3% (out of 1,322 patients), respectively.

## PHO Reviewer’s Comments

- The authors use the term ‘mortality rate’ to describe the proportion of cases that are fatal (i.e., case fatality ratio).
- The authors refer to the logistical hurdles in getting medical supplies to the epicentre as a contributor to the rapid increase in cases, highlighting the importance of ensuring that proposed

solutions to an infectious disease outbreak (such as the widescale public health measures implemented in Wuhan) do not give rise to further problems.

- The authors focus on mobilizing tangible health care resources as outbreak control actions. On the other hand, preventive measures may be more efficient and examples include: enhancing health care workers' knowledge of infection prevention, redesigning patient flow within health care facilities to reduce cross-infection and educating the public to allow safe home care of less severe cases.

## Citation

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